HOMO-DOUBLY LABELED COMPOSITIONS FOR THE DETECTION OF ENZYME ACTIVITY IN BIOLOGICAL SAMPLES

ABSTRACT OF THE DISCLOSURE

The present invention provides for novel reagents whose fluorescence changes upon cleavage or a change in conformation of a backbone. The reagents comprise a backbone (*e.g.* nucleic acid, polypeptide, *etc.*) joining two fluorophores of the same species whereby the fluorophores form an H-dimer resulting in quenching of the fluorescence of the fluorophores. When the backbone is cleaved or changes conformation, the fluorophores are separated, no longer forming an H-type dimer, and are de-quenched thereby providing a detectable signal. The use of a single fluorophore rather than an "acceptor-donor" fluoresecence resonance energy transfer system offers synthesis and performance advantages.